

Application No.: 10/521,351

Docket No.: H6808.0071/P071

**REMARKS**

Claims 5, 6, 13 and 16 have been amended. New claims 32 and 33 have been added. Support for the changes to the claims appears in the original disclosure, including the discussion of the genome-related information recording medium illustrated in Figs. 4 and 5, and the personal computer 3 illustrated in Figs. 1 and 4. The claims should not be limited, however, to the examples described and shown in the specification and drawings. The application as amended contains claims 5, 6 and 13-33 – four independent claims and a total of twenty-three claims. Please charge the applicable fees for the two new dependent claims, and any other fees required in connection with this paper, to Deposit Account No. 04-1073. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

Claims 5, 6 and 13-31 are rejected 35 U.S.C. § 101, as being directed to non-statutory subject matter. Reconsideration is respectfully requested. The claims as amended are believed to in full compliance with § 101.

According to the Federal Circuit, the test for method claim compliance with § 101 is the machine-or-transformation test. *In re Bilski*, 545 F.3d 943, 961 (Fed. Cir. 2008). Turning then to the first prong of the machine-or-transformation test, according to the Federal Circuit, a method is patent-eligible under § 101 if it is “tied to a particular machine or apparatus,” not counting any activity that is “insignificant” and “extra-solution.” *Bilski*, at 954, 957, n.14. A “machine” may be a “system or device, such as an electronic computer, that performs or assists in the performance of a human task.” *The American Heritage Dictionary, Second College Edition* (copy enclosed).

The method of claim 5, as amended, is indeed tied to a particular machine or apparatus, in ways that are neither insignificant nor extra-solution in nature. A polymorphism pattern is obtained from a memory device, and the obtaining step and other recited steps are all conducted under the control of a processor. The claimed method cannot be performed without the memory device and the processor, and the two machines are not “insignificant” aspects of

Application No.: 10/521,351

Docket No.: H6808.0071/P071

the claim, nor are they part of any “extra-solution” activity. They are central to what is being claimed. Therefore, claim 5, as amended, passes the first prong of the machine-or-transformation test, and it only needs to pass the first prong (it is the machine-or-transformation test, not a machine-and-transformation test). Therefore, the § 101 rejection of claim 5 should be withdrawn.

The use of the memory device, and the manner in which the steps are tied to the recited processor, make claim 5 easily distinguishable from the claim that was rejected in *Bilski*. The *Bilski* claim (claim 1) related to “hedging risk in . . . commodities trading.” It did not recite anything remotely like a machine or apparatus:

1. A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:
  - (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;
  - (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
  - (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions. [*Bilski*, 545 F.2d at 949.]

Moreover, under the second prong of the *Bilski* machine-or-transformation test, even if a method is not tied to a particular machine or apparatus, it is still patent-eligible under § 101 if it transforms data that represents a physical or tangible thing. *In re Bilski*, 545 F.3d at 962-63. The *Bilski* court approved the decision of its predecessor court, *In re Abele*, 684 F.2d 902

Application No.: 10/521,351

Docket No.: H6808.0071/P071

(C.C.P.A. 1982), where dependent claim 6 was held to be in compliance with § 101, even though the claimed method (a method of displaying data) could be performed without any machine or apparatus:

6. The method of claim 5 [A method of displaying data in a field comprising the steps of calculating the difference between the local value of the data at a data point in the field and the average value of the data in a region of the field which surrounds said point for each point in said field, and displaying the value of said difference as a signed gray scale at a point in a picture which corresponds to said data point] wherein said data is X-ray attenuation data produced in a two dimensional field by a computed tomography scanner. [*In re Abele*, 684 F.2d at 908.]

According to the Federal Circuit, the *Abele* claim (claim 6) was in compliance with § 101 because the data that was electronically transformed into a visual depiction represented physical, tangible objects (body tissues). It did not matter that there was no transformation of the underlying physical, tangible objects. *Bilski*, 545 F.3d at 953.

Claim 5 of the present application is like the dependent claim that was accepted in *Abele/Bilski*. The method of claim 5 transforms data that represents a physical, tangible thing. The “plurality of pieces of polymorphism pattern” of claim 5 is data that represents actual genetic material. In a preferred embodiment, the “plurality of pieces of polymorphism pattern” (Fig. 5) represent a certain individual’s genetic material at respective polymorphism addresses. The data is transformed into “semantic information . . . and/or information associated with the semantic information . . . [which] refers to information on phenotypes caused by one or more differences in polymorphism patterns.” Thus, claim 5 passes the second prong of the machine-or-transformation test, and so this is an independent reason why the § 101 rejection of claim 5 should be withdrawn.

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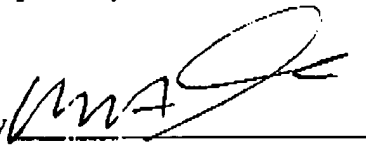
Application No.: 10/521,351

Docket No.: H6808.0071/P071

Claims 6 and 13-33, as amended, recite limitations that are the same as or similar to those discussed above in connection with 5. For at least the foregoing reasons, allowance of the application as amended, with claims 5, 6 and 13-33, is solicited. Favorable action on the application is solicited.

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Respectfully submitted,

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